From:	Morley, Thomas A - MSHA
To:	Denk, Joseph M - MSHA
Subject:	FW: SMO Revenue Mine Vent Plan 2-24-14
Date:	Wednesday, February 26, 2014 7:59:52 AM
Attachments:	SMO Vent Plan cover letter 2-24-14.pdf SMO Revenue Mine Ventilation Plan 2-24-14.pdf Final Vent Plan Maps.zip Historic Maps.zip

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From: Abel, Kevin - MSHA
Sent: Tuesday, February 25, 2014 11:04 AM
To: Morley, Thomas A - MSHA
Subject: FW: SMO Revenue Mine Vent Plan 2-24-14

Kevin H. Abel

Assistant District Manager
Mine Safety and Health Administration
North East District
178 Thorn Hill Rd, Suite 100
Warrendale, PA 15086
Ph: (724) 772-2334

From: Smith, Hillary - MSHA
Sent: Tuesday, February 25, 2014 10:10 AM
To: Abel, Kevin - MSHA; Morley, Thomas A - MSHA
Cc: Laufenberg, Richard - MSHA; Crelly, Dustan W - MSHA
Subject: FW: SMO Revenue Mine Vent Plan 2-24-14

Here is Star Mine's new plan.

Hillary A. Smith
Assistant District Manager
MSHA - Rocky Mountain District
303-231-5579

From: John Bettridge [mailto:john@swproduction.com]
Sent: Tuesday, February 25, 2014 7:22 AM
To: Smith, Hillary - MSHA
Subject: SMO Revenue Mine Vent Plan 2-24-14

Hillary,
Please find attached the updated Revenue Mine vent plan and related documents. As discussed in our meeting last Thursday we have included the addition of 2 ventilation control doors in the plan and provided further information for the areas requested. I have also included a cover letter for the plan to more specifically address the items in the MSHA letter of February 14, 2014. Two hardcopies of all will be delivered to your office this morning.

Please let me know if you need anything further or have any questions on the plan. We would be glad to come to your office and meet in the next few days to go over all if that would be of help.

Regards,
John

STAR MINE OPERATIONS, LLC

1675 Larimer St. #820

Denver, CO 80209

February 24, 2014

Mr. Richard Laufenberg, District Manager
MSHA M/NM Rocky Mountain District
P. O. Box 25367, DFC
Denver, CO 80225

RE: Star Mine Operations 05-03528 57.8520 Ventilation Plan

Dear Mr. Laufenberg,

Please find attached the Revenue Mine ventilation plan which is being submitted to reflect changes in the ventilation plan originally submitted on February 10, 2014 and to provide additional information requested in the MSHA letter from your office dated February 14, 2014 and as discussed in our meeting of February 20, 2014.

The particular items noted in your letter of February 14, 2014 are addressed in further detail below and in the attached updated ventilation plan dated February 24, 2014.

1a. The direction and air quantity flowing in to Shaft No.1 are shown on maps 1, 3 and 5. It is believed a connection exists through the old workings and noted incline between the shaft and LOCX 6+00.

1b. Air quantity readings at all exhaust locations at the Revenue level are shown on maps 1 and 3. The long-section on map 1 depicts the air exhaust exiting to surface through waste and fill above the 3 level portal. This air exhaust has been observed and confirmed by testing with mercaptan released at the Revenue level and detected at the 3 level portal. However, due to the various areas that the air exhaust is moving through to the surface, no quantitative readings can be obtained.

As described in the attached vent plan, in order to provide for additional ventilation control in the Revenue Mine, ventilation control doors are being installed in the Revenue tunnel in in front of the Virginius drift as shown on maps 1, 3 and 5 and at the front of the Yellow Rose drift as shown on map 2. Under normal operating conditions positive pressure will be kept on the Revenue Mine and air will exhaust out the old workings as shown on map 1. In the unlikely

event that the ventilation could not be maintained as shown, the ventilation control door at the Virginius would be closed to prevent any back flow of air from the old workings. In the event isolation of the Yellow Rose ventilation was required, the ventilation control door at the entrance to the Yellow Rose would be closed. Both the Revenue tunnel and Yellow Rose drift can be purged using fresh air from the compressed air-line system should that be necessary.

1c. Please refer to map 1, 2, 3 and 5 for identification of status of all shafts, ramps, winze and raises. Any known or possible connection to these areas and old working has also been noted.

1d. Please refer to map 1, 3 and 5 and the description in the vent plan of how air exits this spiled area and through the old workings.

2. Please refer to the historic drawings included in the vent plan and the illustration of historic drifts and raises provided on maps 1, 2, 3 and 5. Historic areas not explored or re-habed are indicated on maps 1 ,2, 3 and 5. In general, all drifts and associated raises are blocked to access other than the Revenue Tunnel, Yellow Rose and the South Virginius for the short distance through x-cuts 1, 2 and 3. The blue highlighted location of the Terrible Drift on map 6 has been corrected and the revised map is included with the vent plan.

3. The attached vent plan has been modified to exclude some of the work contemplated in the plan filed January 9, 2014. In particular, the shaft work in the North Virginius has been removed until further evaluation is completed and a plan constructed. Any proposed work in the North Virginius beyond the Blue Lagoon has also been removed pending additional feasibility study.

As requested in the letters of January 9 and February 14, 2014, items 6b through 6e are addressed below. Work referenced in items 6f through 6j has been removed from the vent plan and those items are not addressed further at this time.

> 6b. The Chinaman's Chute Raise a.k.a Vir Nor 2-3-1 Chute and Slope is installed and extends to approximately 30' above the Revenue track level and dead-heads there. There is not any connection to old working.
>
> 6c. The bulkhead (stopping) inby the Blue Lagoon is installed.
>
> 6d. The 18" vent bag going into the VirNor 2-3-1 (Chinaman's Chute raise) will be installed with the beginning of the scram level per the attached vent plan. It will be extended as work progresses as described in the plan.
>
> 6e. A pillar will be left between the old stope and the new Vir Nor 2-3-1 stope. At the scram level breakthrough to the old works will be conducted in the same manner as a

normal drift round, i.e. drill, blast, remove material. Ventilation will be provided to the working face as shown in the plan.

Any planned future work that represents a change to the attached ventilation plan will be submitted as an update or a new plan prepared and submitted if the planned work will result in significant changes to the existing plan.

4. New fan curves have been prepared and included in the plan based on an air density at 10,000' altitude of .051 ppcf. Operating pressures were not measured and those shown in the fan tables are based on the respective fan curves and estimates of friction loss in associated ducting.

Should you have any questions or need anything further please feel free to contact me at 303-534-6500.

Sincerely,

John A. Bettridge
Acting Operations Manager
Star Mine Operations, LLC

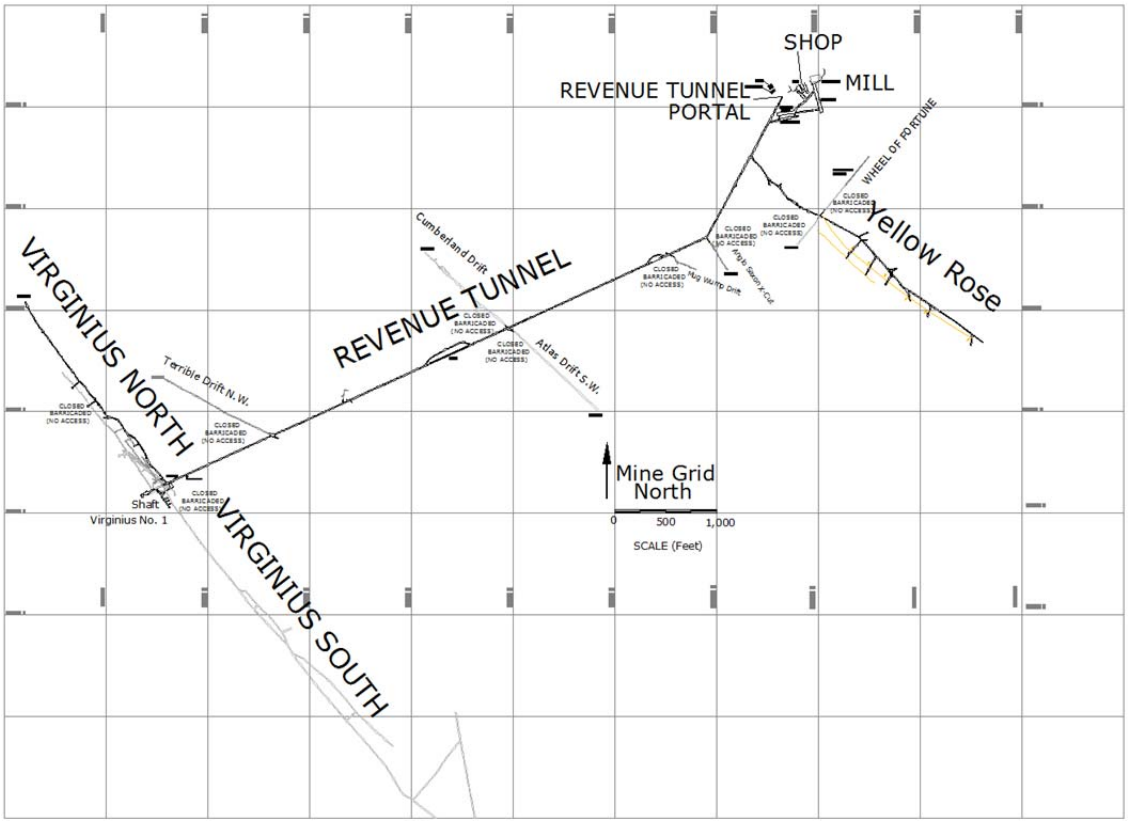
REVENUE MINE VENTILATION PLAN

MSHA ID # 05-03520

FEBRUARY 24, 2014

TABLE OF CONTENTS

The Revenue Mine, located approximately 5 miles south of Ouray, CO, is currently developing two separate veins from the same portal via the Revenue Tunnel; the Yellow Rose and the Virginius. The Virginius vein workings are designated as Virginius North, north of the Revenue Tunnel and as Virginius South, south of the Revenue Tunnel. The following map shows the general work areas.



In addition to the mine workings the site has an underground mill and an underground shop. The mill is connected to the Revenue tunnel via an ore loading drift to the mill coarse ore bin as well as emergency escape way. The underground shop is located approximately 200' from the mine portal and is detached and isolated from any other underground workings and has its own independent ventilation system.

In general, the Revenue Mine ventilation system includes two dual 30 HP (60 HP per fan) main fans installed at the Revenue air doors and booster fans located at the mill coarse ore bin (40 HP), Yellow Rose drift (60 HP) and South Virginius (50 HP). Air is drawn into the portal at approximately 30,000 cfm. The mill fan pulls approximately 14,000 cfm ventilating through the mill, the remaining 16,000 cfm travels down the Revenue tunnel. The 60 HP Yellow Rose booster fan circulates approximately 10,000 cfm through the Yellow Rose drift to the face and various workings in the drift. The two 60 HP main fans direct the remaining 16,000 cfm through 24" vent pipes installed between the air doors then on down

the Revenue tunnel. At the South Virginius drift the 50 HP booster fan distributes fresh air to the South Virginius face and cross-cuts, shaft area and old shaft/incline area. All air exits through the old workings connected in these areas and continues to surface and exhausts at the historic workings near the 3 level on top of the mountain.

In order to provide for additional ventilation control in the Revenue Mine, ventilation control doors are being installed in the Revenue tunnel in in front of the Virginius drift as shown on maps 1, 3 and 5 and at the front of the Yellow Rose drift as shown on map 2. Under normal operating conditions positive pressure will be kept on the Revenue Mine and air will exhaust out the old workings as shown on map 1. In the unlikely event that the ventilation could not be maintained as shown, the ventilation control door at the Virginius would be closed to prevent any back flow of air from the old workings. In the event isolation of the Yellow Rose ventilation was required, the ventilation control door at the entrance to the Yellow Rose would be closed. Both the Revenue tunnel and Yellow Rose drift can be purged using fresh air from the compressed air-line system should that be necessary.

The shop area is ventilated by a 10 HP fan with a VFD control that supplies air volumes in a range of approximately 1,000 cfm to 8,000 cfm. Air exhaust is maintained through regulators on the two doors and the utility wall as well as other openings around the equipment doors and framework including the full opening equipment doors. The doors are normally closed except to allow access for people or equipment. Diesel equipment is generally turned off as soon as it is pulled into the shop, maintenance and/or repairs completed, then started again and pulled back to surface to run. If it is necessary to run the equipment in the shop for any time the VFD on the fan is increased to supply additional ventilation. The DPM program is followed in the shop including monitoring.

This submittal will address the primary ventilation features of the overall mine, mill and shop. Each portion of the standard will be addressed in the order presented in the CFR 30 57.8520 standard.

(a) **The mine name**.

Revenue Mine (MSHA ID 05-03528)

(b) **The current mine map or schematic or series of mine maps or schematics of an appropriate scale, not greater than five hundred feet to the inch, showing:**

(1) Direction and quantity of principal air flows;
See Maps as identified at the end of this section.

(2) Locations of seals used to isolate abandoned workings;
See Maps as identified at the end of this section.

(3) Locations of areas withdrawn from the ventilation system;
See Maps as identified at the end of this section.

(4) Locations of all main, booster and auxiliary fans not shown in paragraph (d) of this standard.
See Maps as identified at the end of this section.

(5) Locations of air regulators and stoppings and ventilation doors not shown in paragraph (d) of this standard;
See Maps as identified at the end of this section.

(6) Locations of overcasts, undercasts and other airway crossover devices not shown in paragraph (d) of this standard;
No overcasts, undercasts or other airway crossover devices are used or planned to be used at the Revenue Mine.
(7) Locations of known oil or gas wells;
No known oil or gas wells exist in the region of the Revenue Mine.
(8) Locations of known underground mine openings adjacent to the mine;
See attached map #5 of adjacent mine openings and the associated narrative document.
(9) Locations of permanent underground shops, diesel fuel storage depots, oil fuel storage depots, hoist rooms, compressors, battery charging stations and explosive storage facilities. Permanent facilities are those intended to exist for one year or more; and
None of the facilities listed above exist underground in the Revenue mine and mill. The underground shop is detached and separated from the Revenue mine and mill as shown on map #4. Refer to map #1 and #4 for facilities listed above and located on the surface.
(10) Significant changes in the ventilation system projected for one year.
See discussion and phase diagrams included with item (d) below.

Included in this submittal are six maps showing the current ventilation plan for the Revenue mine, mill and shop. Planned work in the Yellow Rose and Virginius South is shown in blue, active headings in black, historic drifts and raises not rehabilitated in light blue. Should any significant change be made to the ventilation program a new plan will be submitted.

- Map #1 Overall Mine Layout 1”=300’
- Map #2 Detail of Yellow Rose area 1”= 100’
- Map #3 Detail of Virginius area 1”=100’
- Map #4 Detail of Portal, Shop and Mill 1”=50’
- Map #5 Detail of Virginius area 1”=50’
- Map #6 Adjacent Mines and Workings to the Revenue Mine 1”=500’ (enlarged from original scale)

Note: All air reading points are located and labeled in the Revenue mine as illustrated on the maps.

Also included in this submittal are the following historical drawings to provide further information on the historic areas that are not currently being worked.

- Drawing #1H Plan view and section of the Monarch a.k.a. Terrible drift and historic Terrible-Monarch Mine workings relation to Revenue-Terrible raise and workings.
- Drawing #2H Section showing Terrible raise from the Revenue level.
- Drawing #3H Showing Cumberland raises and old working in relation to the Revenue.
- Drawing #4H Showing old incline to surface from the Revenue Tunnel near the Yellow Rose intersect.

(c) Mine fan data for all active main and booster fans including manufacturer's name, type, size, fan speed, blade setting, approximate pressure at present operating point, and motor brake horsepower rating.

The main and booster fans are shown on maps 1 – 5 listed above in sec (b) and are presented in the following table. The fan curves are included as Appendix A**.** As conditions necessitate the second stage on the two Revenue Tunnel main fans may be turned on to increase output.

Main Fans	Area of Mine	Spendrup Model	Delivery System	Blade Setting	Measured Air Volume (cfm)	Est Pressure In w.g.
1	Revenue Tunnel	071-035-3600-B-1	Air Door Rigid Duct	Fixed	8,000	17"
2	Revenue Tunnel	071-035-3600-B-1	Air Door Rigid Duct	Fixed	8,000	17"
3	Yellow Rose	071-035-3600-B-1	Rigid Duct	Fixed	10,400	22"
4	Virginius South	063-040-3600-C-1	Vent Bag	8	12,900	6"
Main Fans	Area of Mine	ABC Model # NA **	Delivery System	Blade Setting	Volume	Pressure
5	Mill	25” 40HP 3600 rpm	Rigid Duct	Fixed	14,000	5"
Main Fan	Area of Mine	Jetair Model	Delivery System	Blade Setting	Volume	Pressure
6	Shop	AA-1-A	Rigid Duct	unknown	5,400	4"
Booster Fan	Area of Mine	Jetair Model	Delivery System	Blade Setting	Volume	Pressure
7	As needed	AA-1-A	Vent Bag	unknown	3,000	~1"

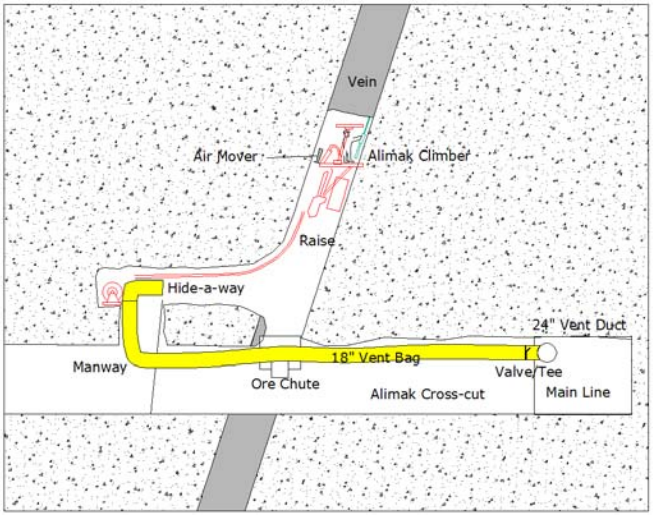
*** Note: There is not a model number on the Mill ABC 40 HP fan and a fan curve is not available.*

(d) Diagrams, descriptions or sketches showing how ventilation is accomplished in each typical type of working place including the approximate quantity of air provided, and typical size and type of auxiliary fans used.

There are several mining methods incorporated at the Revenue/Virginius mine, all utilizing pneumatic and electric mining equipment. In the Yellow Rose area Alimak Raise Climbers are used to develop the stopes in addition to the other pneumatic and electric equipment. Currently there are 2 active Alimak raises at XC-3 and XC-4. Pneumatic and electric equipment is in use in XC-2, XC-6, XC-8 and the Yellow Rose main line.

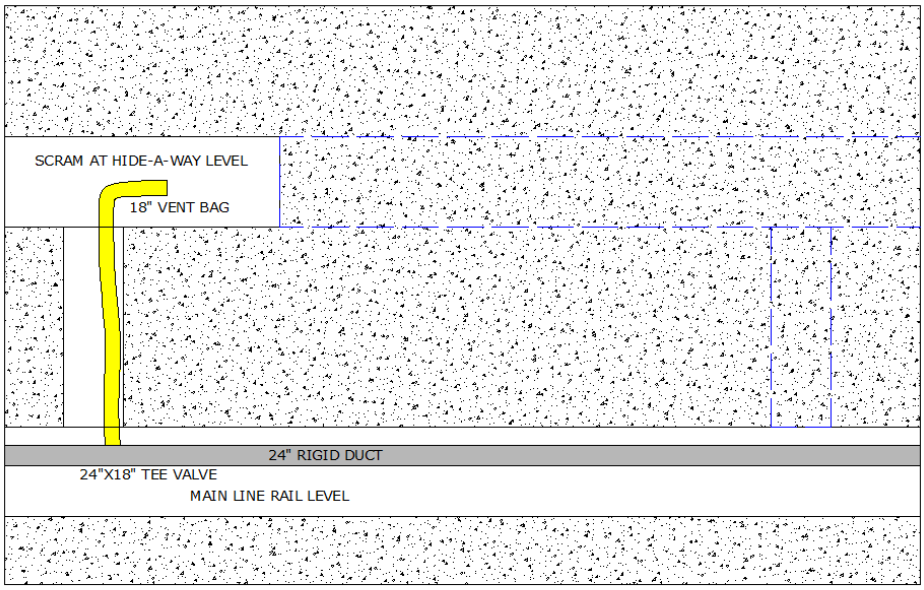
YELLOW ROSE

The following sketch shows the general ventilation for an Alimak Raise. Fresh air is supplied to the hide-a-way level from the main line ventilation duct through an 18 inch diameter vent bag, regulated by a butterfly valve, an air mover is utilized to sweep the face. The main line air is supplied by a dual 30 horsepower fan located in the Revenue Tunnel (Fan #3). The volume of air regulated into the hide-a-way is on the order of 1,000 to 3,000 cfm. Inactive crosscuts that are not being ventilated shall be barricaded off in by the valve to allow access to the valve for re-establishing ventilation when needed.

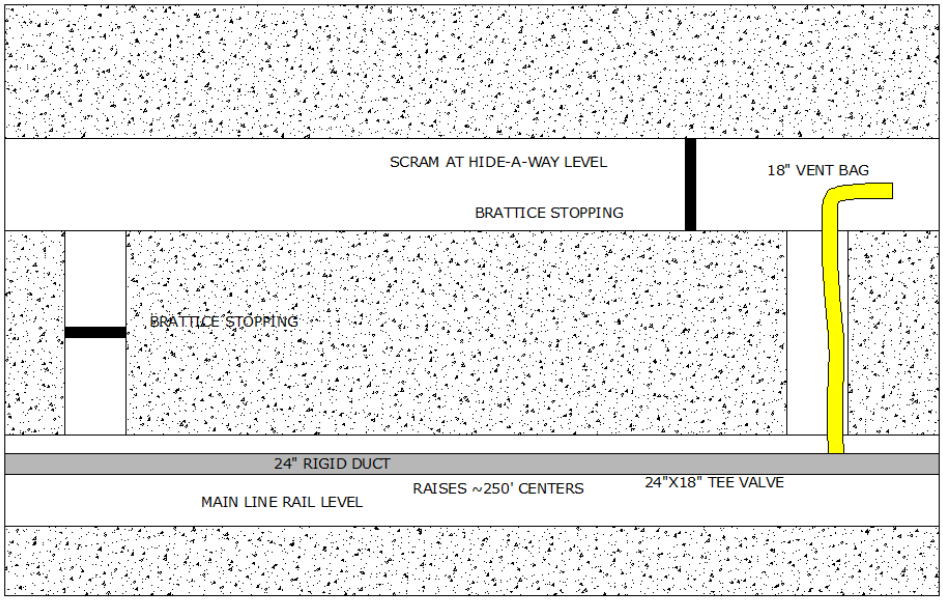


Ventilation of the main line in the Yellow Rose is accomplished by extending the 24 inch diameter rigid duct to approximately 100 feet from the face and adding vent bag to sweep the face.

Stoping in the Yellow Rose will begin in cross-cut #8. Scrams will be driven at the hide-a-way level in the vein. Concurrently the main line will be driven in the vein at the rail level. Scrams will be driven to connect the raises which are located at approximately 250' intervals. Typical ventilation will be accomplished with 18" vent bags as illustrated in phase 1 and 2 diagrams below**.**



PHASE 1



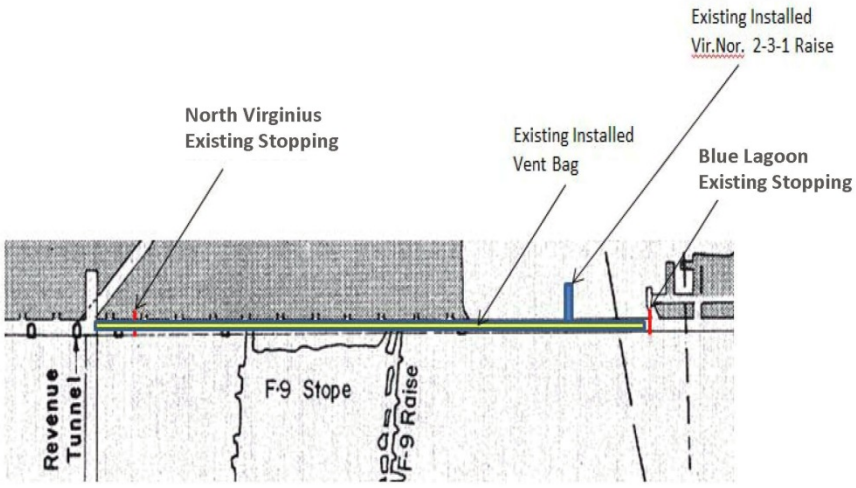
PHASE 2

The Alimak raise in cross cut #8 is scheduled to break through to the surface approximately six months from the time mine development resumes and this raise will be used to exhaust to the surface. Upon completion of the raise to surface, the plan will be to move the main fan between cross-cut #6 and cross-cut #8 to provide fresh air supply, through rigid duct, toward cross-cut #10 and future development advance. At the Yellow Rose drift main level an air door will be installed and an additional fan of appropriate size will be placed in cross-cut #8 to direct the air out of the exhaust raise.

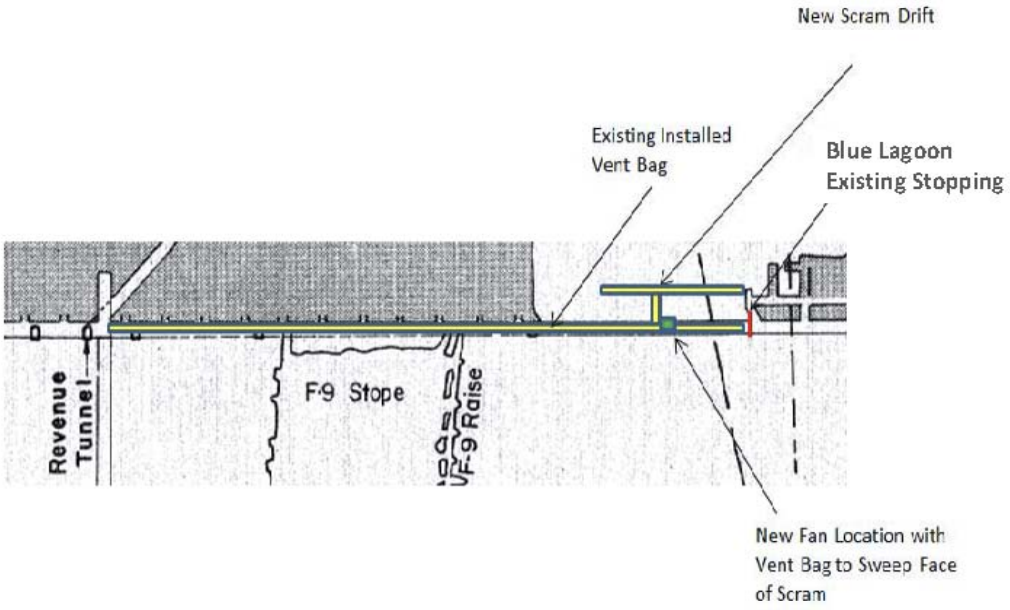
Virginius North

Currently there is a stopping installed just beyond the raise-incline cross-cut at the entrance to the North Virginius drift. Development and the ventilation of the stopes along with the already existing VirNor 2-3-1 in the Virginius North is illustrated in the typical diagrams shown below. Generally the plan is to direct the movement of fresh air into the Virginius drift to the face of the Blue Lagoon stopping then add an auxiliary fan to ventilate development of the VirNor 2-3-1 stope. Air exhaust will be back down the North Virginius drift to the existing air exhaust points shown on maps 1, 3 and 5.

Phase 1:
Maintain established ventilation while removing the Virginius North stopping and then extend ventilation to the stopping near the Blue Lagoon through existing, installed 24" ventilation bag.



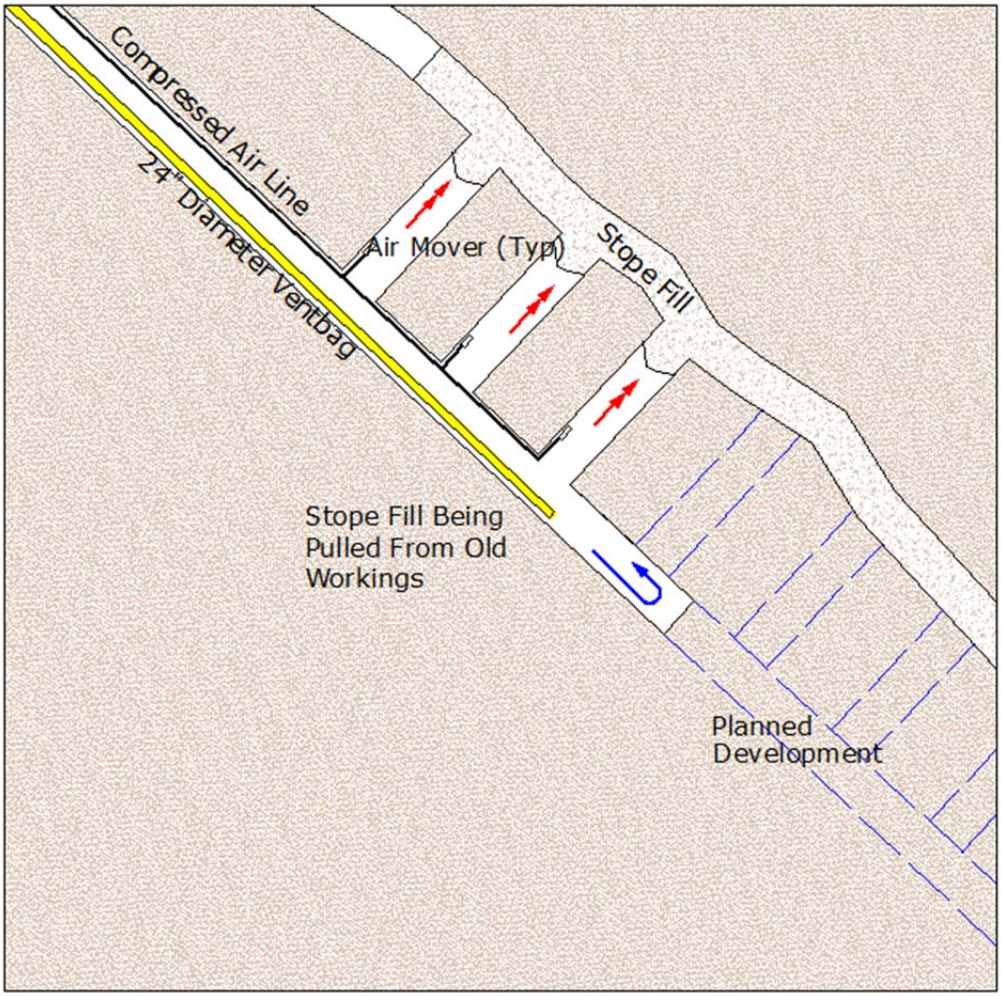
Phase 2:
Install an auxiliary fan and 18 inch ventilation bag in the VirNor 2-3-1 central raise and into the associated scram drift and position the bag to sweep the face of the scram. This bag will be left in and extended as the scram drift is advanced.

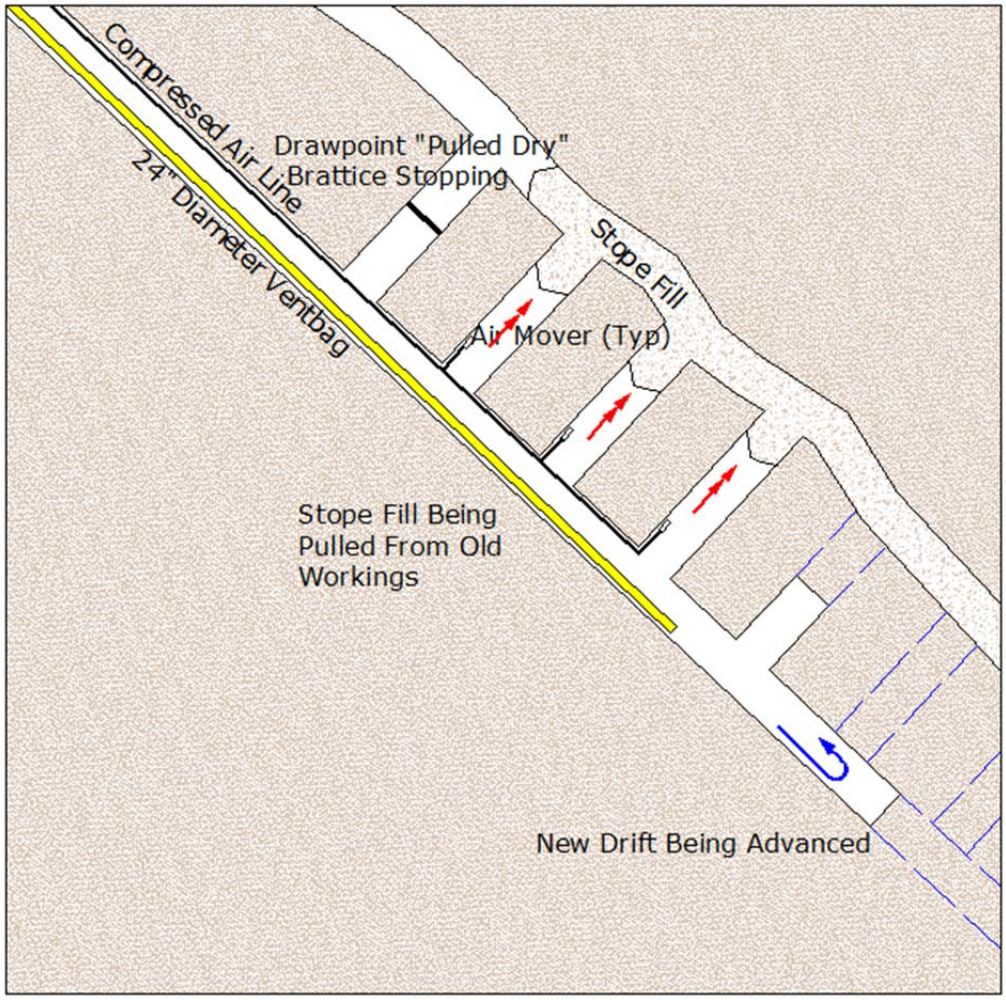


If conditions dictate that changes are necessary to the above plan then the ventilation plan will be updated to reflect the changes and communicated to the affected personnel.

VIRGINIUS SOUTH

Over the course of the next year the Virginius South will be utilized as a source of mill feed from the material left in the historic stopes. The drift will be extended and new draw points will be developed. Air movers will be used to ventilate each cross cut area and the existing vent bag will be extended and used to ventilate the drift as it is advanced. Draw points are also air exhaust points connecting to the old working as shown on maps 1, 3 and 5 and in the typical diagrams below. Once a draw point has been pulled dry the access will be bratticed off to direct air movement to the active draw points. See typical diagrams below.





In the latter part of the year it is anticipated rehabilitation of the Virginius No. 1 Shaft (actually a winze) could begin. This shaft would be used to access the levels below the Revenue level. A feasibility study is also being conducted to rehab the historic Virginius shaft, identified on the map 1 long-section, that connects to the 3 level portal or to install a new raise to surface at the end of the North Virginius drift. Either of these options in the North Virginius would be used to provide for a single Virginius ventilation point as well as adding an additional evacuation route.

Prior to undertaking any work on shafts or a new raise, a detailed ventilation plan will be developed and made a part of the Revenue Mine vent plan and submitted to MSHA as well as communicated to the affected personnel.

SHOP

Map #4 illustrates the ventilation system for the shop. Within the next 6 months it is anticipated a flexible-vent exhaust collection system will be installed. The system will allow a flexible-vent tube to be installed over the exhaust of any equipment that is run in the shop and will direct the equipment exhaust through a booster fan then discharged to the outside.

MILL

Map #4 illustrates the ventilation system for the mill. It is planned to install a VFD on the mill 40 HP fan within the next 60 days. The VFD will allow the fan to operate in a range of approximately 3,000 to 14,000 CFM. The air volume ventilating the mill will be adjusted to optimize air quality and temperature.

(e) The number and type of internal combustion engine units used underground, including make and model of unit, type of engine, make and model of engine, brake horsepower rating of engine, and approval number.

Appendix B is a list of all the current diesel equipment at the Revenue mine. This equipment is for the most part used only on surface. Any of the listed equipment may be moved in to the shop area for service or maintenance. None of the equipment is used in the Revenue mine proper. The smaller equipment like the skid-steer or the scissor-lift may be used in the mill area in the case of maintenance, clean up or emergency from time to time but in general will not be part of the mill operation. Regardless of the area, if diesel equipment is used underground, the DPM program will be followed including required monitoring. The table will be updated with any additions or removal of diesel equipment at the mine.

Additional Comments:

The exhaust location of the air for the Virginius workings was determined by releasing ethyl mercaptan at the spiled section of the Virginius South working area where the air is exiting through the various workings as shown on map #1, 3 and 5. Subsequent to the release of the stench, inspections were intermittently made in upper Governor Basin at the historic 3 level area and surrounding surface for indication of stench. Weather conditions and related access by helicopter necessitated intermittent monitoring. At approximately 3 hours post stench release, the 3 level was checked and mercaptan was smelled. It was observed air was exhausting inside the old Virginius 3 level area and continuing upwards through the historic working towards surface. Air did not exit to through the 3 level portal. (The 3 level is connected to the old workings via a historic, inaccessible incline and old shaft.)

A smoke test was conducted in the spiled section of the South Virginius workings to look for surface indications at surrounding mines and portals in the area. Approximately 1.2 million cubic feet of red and yellow smoke was generated over a 1 hour period beneath the spilings in the South Virginius with the main ventilation fans running at the air doors and the historic 3 level portal blocked. Smoke immediately and continually traveled up into the old workings through the 3 cross-cuts in the South Virginius drift as well as the workings above the old #1 shaft. At the end of the smoke generation it was observed the smoke completely cleared the drift area in approximately 30 minutes. Two visual surveys were made by helicopter over a time period of about 4 hours of the Revenue mine surface and surrounding historic mine areas and no identifying traces of the smoke were observed.

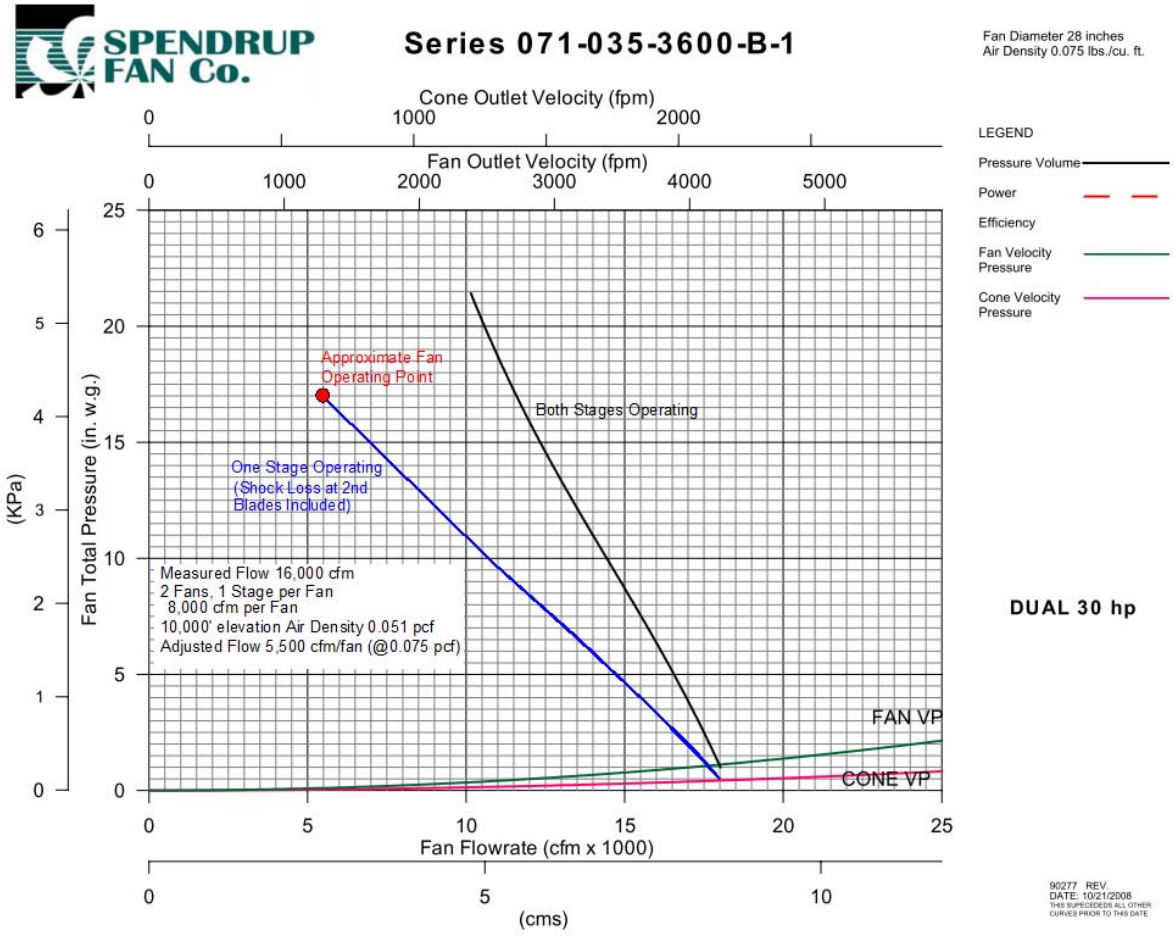
APPENDIX A – FAN CURVE DATA

MAIN MINE FANS 2-DUAL STAGE EACH AT AIRDOORS

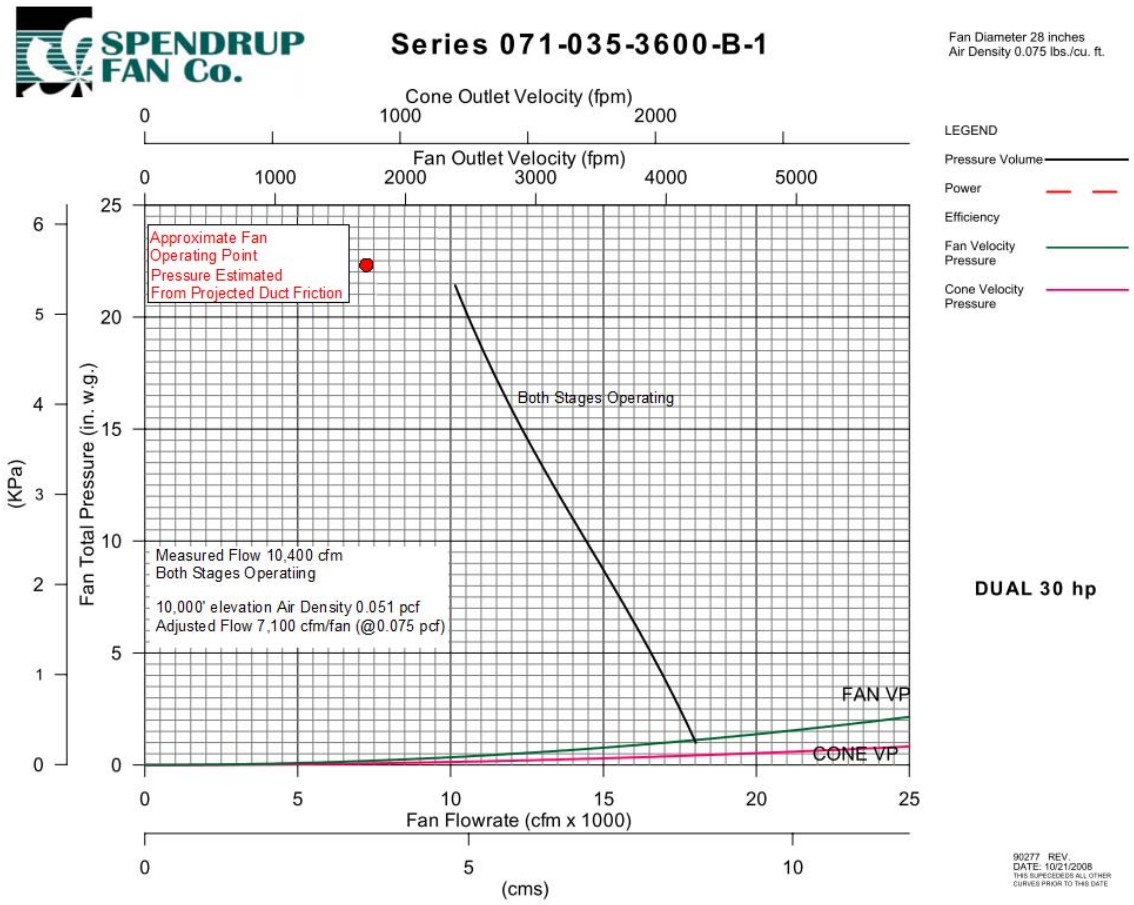
BOTH FANS WITH ONE STAGE

PER FAN RUNNING AT THIS TIME

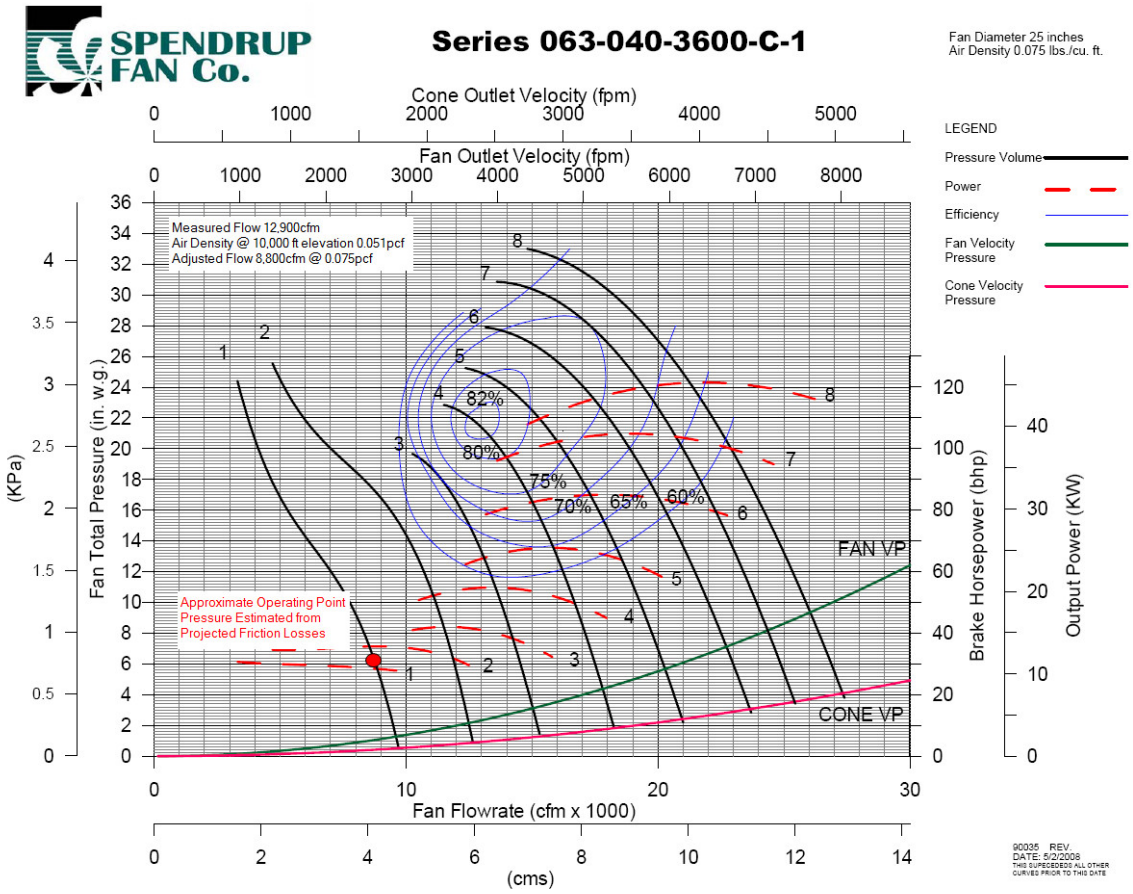
SINGLE AND DUAL STAGE FAN CURVE SHOWN



YELLOW ROSE FAN PRESSURING 24" RIGID DUCT



SOUTH VIRGINIUS DRIFT FAN PRESSURING 24" VENT BAG



MILL FAN LOCATED IN MILL FEED DRIFT 30" RIGID DUCT TO MILL

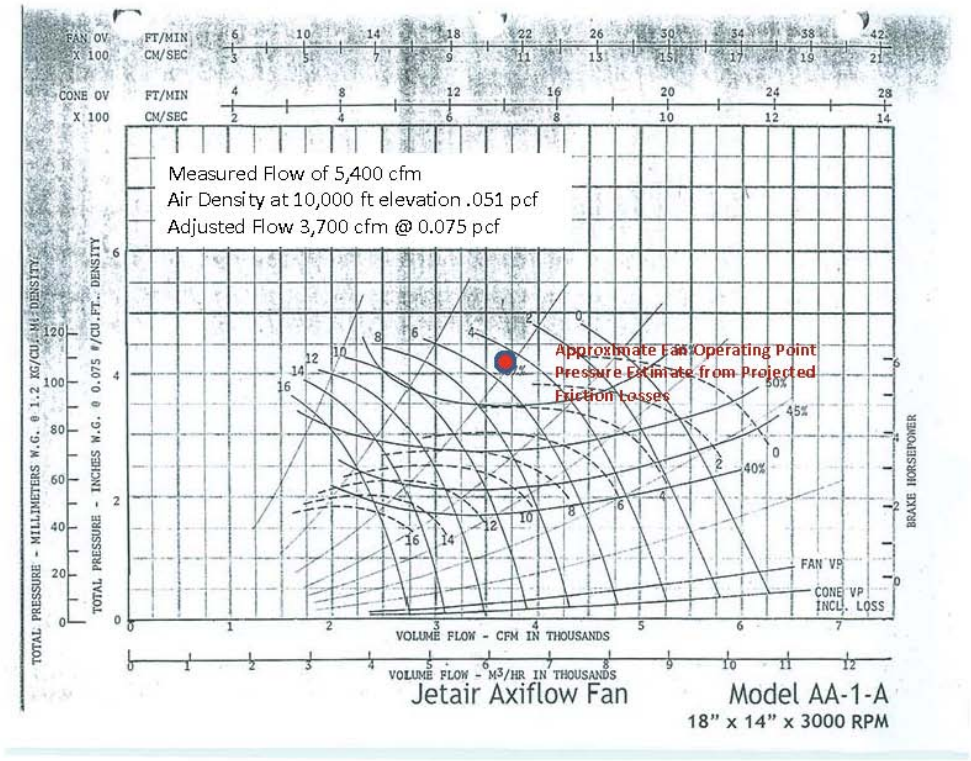
NO FAN CURVE AVAIABLE

SEE FAN DATA PROVIDED IN FAN TABLE PAGE 4

OF THIS PLAN

SHOP FAN 18" RIGID DUCT THROUGHOUT SHOP

JETAIR AXIFLOW FLAN 14" HUB



APPENDIX B – REVENUE MINE DIESEL ENGINE INVENTORY

February 24, 2014

Surface Diesel Powered Equipment							
TYPE	MAKE	MODEL	FUEL TYPE	ENGINE MAKE	ENGINE MODEL	BHP	APPROVAL NUMBER
Excavator	CAT	320CL	Diesel	CAT	3066T	128	EPA Tier II
Excavator	CAT	325D L	Diesel	CAT	C7 Accert	204	EPA Tier II
Dozer	CAT	D5N XL	Diesel	CAT	3126B DITAAC	121	EPA Tier II
Wheeled Loader	CAT	IT38H	Diesel	CAT	6.6 ACERT	180	EPA Tier II
Wheeled Loader	CAT	IT38H	Diesel	CAT	6.6 ACERT	180	EPA Tier II
Articulated Truck	CAT	725	Diesel	CAT	C11 ACERT	309	EPA Tier II
Articulated Truck	CAT	725	Diesel	CAT	C11 ACERT	309	EPA Tier II
Backhoe Loader	CAT	446D	Diesel	CAT	3114 DIT	102	EPA Tier II
Skidsteer	CAT	268B	Diesel	CAT	3044C DIT	76	EPA Tier II
Skidsteer	CAT	226B	Diesel	CAT	3044C DIT	76	EPA Tier II
Rolling Compactor	CAT	CS-433E	Diesel	CAT	3054C	96	EPA Tier II
Telehandler	CAT	TH560B	Diesel	CAT	3054E	94.9	EPA Tier II
Mini Excavator	Bobcat	E55	Diesel	Doosan	E55 T4	49.8	EPA Tier II
Vibrating Box Screener	Vibroscreen	1796	Diesel	Yanmar	L100V	9.1	EPA Tier II
4x4 Flatbed Truck	IH	1800S	Diesel	IH	DT466	210	EPA Tier I
4x4 Flatbed Truck	Dodge	RAM 5500	Diesel	Cummins	6.7L	385	EPA Tier II
4x4 Pickup	Ford	F350	Diesel	Powerstroke	6.4L	350	EPA Tier II
4x4 Pickup	Ford	F250	Diesel	Powerstroke	6.4L	350	EPA Tier II
Boom Lift-Straight	Genie	Genie S-45	Diesel	Perkins	404D-22	51	EPA Tier II
Boom Lift-Articulated	Genie	Genie Z-45	Diesel	Perkins	404D-22	51	EPA Tier II
Portable Air Compressor	Chicago Pneu	Unknown	Diesel	Perkins	404D-22	51	EPA Tier II
Crane Truck	IH Eagle/Terex	5092RS	Diesel	Cummins	NP14	350	EPA Tier II
Trench Roller	Wacker	RT82-SC	Diesel	Lombardini	LDW 903	15.6	EPA Tier II

Known Underground Mines Adjacent to the Revenue Vurginius
Shown in Orange

1. Revenue Portal; 2. Wheel of Fortune; 3. Camp Bird; 4. Bimettalist;
5. Hawkeye Tunnel; 6. Torpedo-Eclipse; 7. Atlas; 8. Highland Chief; 9. San Pedro;
10. Mikado; 11. Yellow Rose; 12. Hidden Treasure; 13. Chicago Tunnel;
14. Camp Bird 14 Level; 15. Trust-Ruby; 16. Governor; 17. Liberty-Banner;
18. Cumberland Shaft; 19. Montana Mine; 20. Tip Top; 21. Sunrise Tunnel;
22. Sweepstakes; 23. Mountain Top; 24. Sydney; 25. Terrible Monarch;
26. Mountain Queen; 27. Humboldt; 28. Smuggler-Union;
29. Mendota Tunnel; 30. Ophir Tunnel; 31. Little Mary

Known or Possible Connections to Current Star Mine Operations LLC Mine Operations
Shown in Green

A. **Wheel of Fortune** – Intercepts Yellow Rose Vein 900' from Revenue Tunnel Intersection. Wheel of Fortune drift extends Northward from Yellow Rose main drift to surface, which is caved and collapsed.

B. **Virginius South to Montana Vein (Camp Bird)** –Mapping indicates Virginius South drift intercepts Idarado workings at the Montana Vein. From Montana Vein workings, exits to surface exist via the Ophir Tunnel, Camp Bird Level 14 adit, Camp Bird Level 2 adit, Chigaco Tunnel and Treasury Tunnel. Condition of all workings is unknown. Access to Montana Vein from the Virginius South drift is blocked by caving approximately 100' from the revenue tunnel.

Star Mine Operations LLC
Revenue Mine Tunnel and Drifts
Highlighted in Blue
Map #6

STAR MINE OPERATIONS

STAR MINE OPERATIONS, LLC
REVENUE MINE
#05-03528
MAP #6 NARRATIVE

MINES ADJACENT TO STAR MINE OPERATION'S REVENUE MINE

1. **Revenue Portal**- Active mine, located adjacent to Sneffels creek.
2. **Wheel of Fortune** – Past producer, inactive and partially collapsed portal. Located 300yds East of Revenue Portal in Silver Basin (Connects to Yellow Rose).
3. **Camp Bird** – Past producer, some intermittent activity over the last year, portals are gated. Located East Southeast of Revenue Portal in Pierson Basin.
4. **Bimettalist** – Past producer, current status unknown. Extension of Wheel of Fortune vein. Located Northeast of Revenue Portal across valley.
5. **Hawkeye Tunnel** – Current status unknown. The main drift of the Bimetallist mine. Located Northeast of Revenue Portal across valley and adjacent to Torpedo-Eclipse Mine.
6. **Torpedo-Eclipse** – Past producer, inactive and gated. Located 500 yds East Northeast of Revenue Portal across valley.
7. **Atlas** – Past producer, partial collapse of portal and flooded. Located 800 yds West Northwest of Revenue Portal.
8. **Highland Chief** – Past producer, portal collapsed and inactive. Located East Southeast of Revenue Portal in Silver Basin.
9. **San Pedro** – Past producer, current status unknown. Located in Silver Basin, East of Revenue Portal.
10. **Mikado** – Past producer, current status unknown. Located in Silver Basin South of the Revenue Portal.
11. **Yellow Rose** – Past producer, portal collapsed and inactive. Located East Southeast of Revenue Portal adjacent to Camp Bird Mine in Pierson Basin.
12. **Hidden Treasure** – Past producer, current status unknown. Located East Southeast of Revenue Portal adjacent to Camp Bird Mine in Pierson Basin.
13. **Chicago Tunnel** – Past producer, current status unknown. Located in Imogene Basin, South Southeast of revenue portal and served as access to Camp Bird workings.
14. **Camp Bird 14 level** – Past producer, gated and inactive. Located in Imogene Basin, Southeast of Revenue Portal.
15. **Trust-Ruby** – Private mine, gated, occasional seasonal activity. Located West Northwest of Revenue Portal, adjacent to Stoney Mountain.
16. **Governor** – Past producer, collapsed portal, inactive. Located in Governor Basin, adjacent to Liberty-Banner Mine.
17. **Liberty-Banner** – Private mine, gated, occasional seasonal activity. Located North of Virginius 1 level in Governor Basin adjacent to Governor Mine.
18. **Cumberland Shaft –** Past producer, collapsed and inactive. Located in Sidney Basin, South Southwest of Revenue portal.
19. **Montana Mine** – Past Producer, Idarado property, inactive. Located in Marshal Basin adjacent to Mendota Tunnel. (Connects to Virginius South at Revenue Level).
20. **Tip Top** – Past producer, current status unknown. Located above mountain top mine.
21. **Sunrise Tunnel –** Private mine, gated, occasional seasonal activity. Located in Mountain Top Mine Governor Basin.

22. **Sweepstakes** – Past producer, current status unknown. Located in Governor Basin adjacent to Liberty-Banner Mine.
23. **Mountain Top** – Private mine, gated, occasional seasonal activity. Located 1200 yds North Northwest of Virginius level 1 portal, Governor Basin.
24. **Sydney** – Past producer, collapsed and inactive. Located in Sydney Basin, Southwest of Revenue Portal.
25. **Terrible-Monarch** – Past producer, collapsed portal and inactive. Located adjacent to Virginius level 1 portal.
26. **Mountain Queen** – Past producer, inactive. Located above Mountain Top Mine.
27. **Humboldt** – Past producer, gated. Located under St. Sophia ridge, 500 yds West of Virginius level 1 portal.
28. **Smuggler-Union** – Past producer, inactive and gated. Extension of Humboldt mine located South-West of Virginius level 1 portal.
29. **Medota Tunnel** – Current status unknown. Located Marshal Basin adjacent to Little Mary Mine.
30. **Ophir Tunnel** – Current status unknown. Located south of the Revenue portal connecting the Montana Vein to Telluride.
31. **Little Mary** – Past producer, current status unknown. Located in Marshal Basin adjacent to Smuggler-Union Mine.

Known or Possible Underground Connections to Star Mine Operations

Known Connections

A. **Wheel of Fortune** – Intercepts Yellow Rose Vein 900' from Revenue Tunnel Intersection. Wheel of Fortune drift extends Northward from Yellow Rose main drift to surface, which is caved and collapsed.
Sources:
-Burbank, W.S., C.F. Park, Jr., E. B. Eckell, V.C. Kelley, M.G. Barclay, M; G; Dings, and R. S. Duce, 1941*, Prelimary geologic map of Red Mountain, Sneffels, and Telluride districts of the Silverton caldera, Ouray and San Miguel Counties,* Colorado: Plate I, U.S. Geological Survey in cooperation with Colorado State Geological Survey Board and Colorado Metal and Mining Fund.
-Moore, George E. *Mines, Mountain Roads, and Rocks: Geologic Road Logs of the Ouray Area*. Ouray, CO: Ouray Historical Society, 2004. Print.
-Per conversation with J.R. Trujillo in 2013.
-Hand written letter from J.R. Trujillo to Bob Larson titled: Investigation of the old Wheel of Fortune drift. No date.

B. **Virginius South to Montana Vein (Camp Bird)** –Mapping indicates Virginius South drift intercepts Idarado workings at the Montana Vein. From Montana Vein workings, exits to surface exist via the Ophir Tunnel, Camp Bird Level 14 adit, Camp Bird Level 2 adit, Chigaco Tunnel and Treasury Tunnel. Condition of all workings is unknown. Access to Montana Vein

from the Virginius South drift is blocked by caving approximately 100' from the revenue tunnel.

Sources:

-Burbank, W.S., C.F. Park, Jr., E. B. Eckell, V.C. Kelley, M.G. Barclay, M; G; Dings, and R. S. Duce, 1941*, Prelimary geologic map of Red Mountain, Sneffels, and Telluride districts of the Silverton caldera, Ouray and San Miguel Counties*, Colorado: Plate I, U.S. Geological Survey in cooperation with Colorado State Geological Survey Board and Colorado Metal and Mining Fund.

-Moore, George E. *Mines, Mountain Roads, and Rocks: Geologic Road Logs of the Ouray Area*. Ouray, CO: Ouray Historical Society, 2004. Print.

-Per conversation with John R. Trujillo in 2013

Proximate historic drifts and workings

C. Atlas-Cumberland – Historic records and maps indicate extensive work from the surface that over lies the revenue tunnel and across Silver Basin to the San Pedro Tunnel. Extensive work was also done on the Atlas-Cumberland vein at the revenue level. From review of historical data, we have determined that the vertical distance between the revenue level workings to surface workings is about 600' and have no indication of a connection between the two.

Sources:

- Burbank, W.S., C.F. Park, Jr., E. B. Eckell, V.C. Kelley, M.G. Barclay, M; G; Dings, and R. S. Duce, 1941*, Prelimary geologic map of Red Mountain, Sneffels, and Telluride districts of the Silverton caldera, Ouray and San Miguel Counties*, Colorado: Plate I, U.S. Geological Survey in cooperation with Colorado State Geological Survey Board and Colorado Metal and Mining Fund.

- Moore, George E. *Mines, Mountain Roads, and Rocks: Geologic Road Logs of the Ouray Area*. Ouray, CO: Ouray Historical Society, 2004. Print

-Hand drawn maps of Cumberland workings by A.E. Ring, A.S. & R.C. cirque Sept 23, 1919.

REV	DATE	DESCRIPTION	DRWN	CHKD	APVD
C	2/23/14	Added text to show closed areas of Mine. Changed color of un-rehabilitated drifts to cyan.	MWC		
B	2/9/14	Update airflow values. Added warehouse shop ventilation	MWC		
A	1/18/14	Deleted Un-used layers, added to Legend, Labeled Upper Workings	MWC		

STAR MINE OPERATIONS

MINE VENTILATION PLAN MAP-1
REVENUE MINE
T 43 N, R 8 W - Ouray County, Colorado
MSHA ID 05-03528

Base Map Drawn by: J. R. Trujillo
Updated by: M. W. Chenoweth P.E.
Ventilation by: J. A. Bettridge

Drawn: 1/09/14
REV -C (2/23/14)

Scale 1"=300'

MF #3
2,400 cfm

2nd Escapeway

Substation
4160v to 480v

FAN #3
DUAL 30 HP FANS (2 Stages Running)
(SPENDRUP 071-035-3600-B-1)

Ventilation Control Door
(To Be Installed)

R/M #3
16,000 cfm

YRV #6
10,400 cfm

Closed
No Access
(Exit To Surface
But Caved)

24" VENT DUCT

AIR DOORS
FANS #1 &#2
2EA. DUAL 30 HP FANS
2 FANS RUNNING (1 Stage each)
(SPENDRUP 071-035-3600-B-1)
2EA. 24" DUCTS

Note:
Mine Power Cable (4160V) runs length of the tunnel,
hung on messenger cable over center of the drift.

Exit to Surface
But Caved

CLOSED
BARRICADED
(NO ACCESS)

CLOSED
BARRICADED
(NO ACCESS)

Wheel of Fortune

24" VENT DUCT

YRV #5
9,700 cfm

R/M #4
15,000 cfm

CLOSED
BARRICADED
(NO ACCESS)

CLOSED
BARRICADED
(NO ACCESS)

Dead End

24' to 18" T
w/ Adj Valve
0 to 3,000 cfm

YRV #4
9,500 cfm

XC-2

18" Vent Bag

YR #2
100 cfm

24' to 18" T
w/ Adj Valve
0 to 3,000 cfm

YRV #3
6,900 cfm

34.2955

XC-3

18" Vent Bag

YR #3
2,800 cfm

Substation
4160v to 480v

24' to 18" T
w/ Adj Valve
0 to 3,000 cfm

Lunch Room

XC-4

18" Vent Bag

YR #4
2,800 cfm

24' to 24" Y
w/ Adj Valve
0 to 3,000 cfm

YR #5
100 cfm

XC-5

Yellow Rose - S.E.

XC-6

24" VENT DUCT

SCRAM 30' ABOVE RAIL LEVEL

Location of Proposed
Vent Raise to Surface
~600 ft, Dia. TBD

YR #6
1,900 cfm

YR #5
100 cfm

XC-8

YRM
2,200 cfm
Working Heading

SCRAM 30' ABOVE RAIL LEVEL
RAIL LEVEL (MAIN LINE)

CLOSED
BARRICADED
(NO ACCESS)

Dead End

Mug Wump Drift

Anglo Saxon X-Cut

DRILL WATER
STORAGE

Dead End

Dead End

Mine Grid
North

0 100 200 300 400 500

SCALE (FEET)

Legend

- Intake Air
- Exhaust Air
- Fan (FAN-ID)
- Exit
- Air Reading Location (R/M #4, 15,000 cfm; ID; FLOW; LOCATION)
- Explosive Magazine
- Refuge Chamber
- Stoppings
- Barricade (B)
- Shaft/Raise
- Phone
- First Aid Station
- Electrical Power Centers

Mine Workings

- Proposed Ventilation Devices To be Constructed Within 1 Year
- Future Drift or Stope Excavation
- Approximate Location of Old Workings Possibly Caved
- Existing Openings
- Caved Workings
- Existing Openings Not Rehabilitated

STAR MINE OPERATIONS

MINE VENTILATION PLAN MAP-2
REVENUE MINE
T 43 N, R 8 W - Ouray County, Colorado
MSHA ID 05-03528

Base Map Drawn by: J. R. Trujillo Updated by: M. W. Chenoweth P.E. Ventilation by: J. A. Bettridge	Drawn: 1/09/14 REV -C (2/23/14)	Scale 1"=100'

Legend

- Intake Air
- Exhaust Air
- Fan (FAN-ID)
- Exit
- Air Reading Location (R/M #4, 15,000 cfm; ID; FLOW; LOCATION)
- Explosive Magazine
- Refuge Chamber
- Stoppings (S)
- Barricade (B)
- Shaft/Raise
- Phone
- First Aid Station
- Electrical Power Centers

Mine Workings

- Proposed Ventilation Devices To be Constructed Within 1 Year
- Future Drift or Stope Excavation
- Approximate Location of Old Workings Possibly Caved
- Caved Workings
- Existing Openings
- Existing Openings Not Rehabilitated

97,000 N

96,000 N

95,000 N

94,000 N

Virginius North Drift N.W.

Terrible Drift N

Ventilation Raise & 2nd Escapeway Location & Dia. TBD

Dead End

23+00 22+00 21+00 20+00 19+00 18+00 17+00 16+00 15+00 14+00 13+00 12+00 11+00 10+00 9+00 8+00 7+00 6+00 5+00 4+00 3+00 2+00 1+00 0+00

All raises inby Blue Lagoon connect to scram level of N. Virginius workings. No connection to surface (see long-section on Map-1)

Dead End BARRICADED

Closed Access, No Connection to Other Workings)

Dead End BARRICADED

For Future Development

(If Stopping Removed Drift Connects to Isolated Workings, No Connection to Surface)

Dead End

Condition of Raises Unknown. No Access to Surface

EXHAUST

VIRGINIUS Shaft Collar

Stopping Closed No Access

BLUE LAGOON COFFER DAM

VIR NOR 2-3-1 CHUTE & STOPE

Closed No Access

Upper Level Drifts See On Long-Section

(If Stoppings Removed Winzes Connect to Lower 210 Level Workings)

FAN #4
SPENDRUP 50 HP 25"
FAN (063-040-3600-C-1)

Closed No Access

F9 Raise

Incline

Closed No Access

F10 Raise

General Dip of Vein and Associated Old Workings

Lunch Room

Ventilation Control Door (To Be Installed)

210 Level
(210' Below Revenue Level)

Closed No Access

BRATTICE STOPPING

(If Stoppings Removed Drifts Connect to Various Old Workings)

Raise/Incline 4,400 cfm

Substation 4160v to 480v

No. 1 Shaft

Hoist Room

Rope Raise

R/M #10 4,000 cfm

R/M #9 3,900 cfm

Spiles

Air Exhausting To Surface Through Old Workings

Closed No Access Blocked by Waste Rock

24" Vent Bag

XC-1 XC-2 XC-3 ETC.

V/S #2 8,500 cfm

Virginius South Working Headings

(See Long-Section)

Old stopes on vein (Caved?) Not Rehabilitated or Explored Connect to Old Workings

Middle Level

Level-5 Level-6 Level-7 Level-8 Level-9 Level-10 Level-12 Level-13 Level-14

Mine Grid North

0 100 200 300 400 500

SCALE (FEET)

Historic Mine Drift and Stope Locations on This Map are Based on Historic Maps. Star Mine Operations Will Update Maps as Actual Workings Locations Can be Verified.

STAR MINE OPERATIONS

MINE VENTILATION PLAN MAP-3
REVENUE MINE
T 43 N, R 8 W - Ouray County, Colorado
MSHA ID 05-03528

Base Map Drawn by: J. R. Trujillo
Updated by: M. W. Chenoweth P.E.
Ventilation by: J. A. Bettridge

Drawn: 1/09/14
REV -C (2/23/14)

Scale 1"=100'

STAR MINE OPERATIONS

MINE VENTILATION PLAN MAP-4
REVENUE MINE
T 43 N, R 8 W - Ouray County, Colorado
MSHA ID 05-03528

Base Map Drawn by: J. R. Trujillo
Updated by: M. W. Chenoweth P.E.
Ventilation by: J. A. Bettridge

Drawn: 1/09/14
REV -C (2/23/14)

Scale 1"=50'

Legend

- Intake Air
- Exhaust Air
- Fan (FAN-ID)
- Exit
- Air Reading Location (R/M #4, 15,000 cfm, ID, FLOW, LOCATION)
- Explosive Magazine
- Refuge Chamber
- Stoppings (S)
- Barricade (B)
- Shaft/Raise
- Phone
- First Aid Station
- Electrical Power Centers

Mine Workings

- Proposed Ventilation Devices To be Constructed Within 1 Year
- Future Drift or Stope Excavation
- Approximate Location of Old Workings Possibly Caved
- Existing Openings
- Caved Workings
- Existing Openings Not Rehabilitated

WAREHOUSE AND SHOPS

Oil Storage

SWITCH GEAR HOUSE
TRANSFORMERS
12,470v to 4,160v

Fuel Storage

101

Approximate location of toe of the mountainside where it intersects with portal sets

Battery Charging Area

Office

Compressors

Regulator Doors
900 cfm
200 cfm
800 cfm

JETAIR
10HP FRESH AIR W/ VFD
(INTAKE)

EXHAUST

Tailings Building with Offices , Dry and Laboratory

Mill air exhausts through 2ea rigid ducts positioned above portal set arch and brow of mountainside.

Fire door creates fire and air tight partition between surface filter building and mill portal

Warehouse Vent #1
3,500 cfm

REGULATOR/DOOR

18" Rigid Duct

Leakage

REVENUE TUNNEL
PORTAL
R/M #1
30,000 cfm

Mill Gallery

Shop Vent #1
1,900 cfm

300 cfm
Circ Fan
W/ 18" Duct

REGULATOR/DOOR

Crushing Gallery

14,000 CFM

500

FAN #5 Fine Ore Bin
25.25"X14" FAN
(MINING EQUIP. C-1-A)

Mill Feed Drift

MF #2
11,300 cfm

MF #1
14,000 cfm

MF #3
2,400 cfm

2nd Escapeway

North
Mine Grid

0 100 200
SCALE (FEET)

R/M #2
16,300 cfm

Substation
4160v to 480v

FAN #3
DUAL 30 HP FANS (2 Stages Running)
(SPENDRUP 071-035-3600-B-1)

Ventilation Control Door

VIRGINIUS Shaft Collar

Legend

- Intake Air
- Exhaust Air
- Fan (FAN-ID)
- Exit
- Air Reading Location (R/M #4, 15,000 cfm, ID, FLOW, LOCATION)
- Explosive Magazine
- Refuge Chamber
- Stoppings (S)
- Barricade (B)
- Shaft/Raise
- Phone
- First Aid Station
- Electrical Power Centers

Mine Workings

- Proposed Ventilation Devices To be Constructed Within 1 Year
- Future Drift or Stope Excavation
- Approximate Location of Old Workings Possibly Caved
- Existing Openings
- Caved Workings
- Existing Openings Not Rehabilitated

Upper Level Drifts See On Long-Section

(If Stoppings Removed Winzes Connect to Lower 210 Level Workings)

11+00

10+00

Stopping Closed No Access

9+00

8+00

BLUE LAGOON COFFER DAM

7+00

18" Vent Bag

VIR NOR 2-3-1 CHUTE & STOPE

6+00

Closed No Access

5+00

F9 Raise

Closed No Access

4+00

Incline

3+00

F10 Raise

Closed No Access

2+00

General Dip of Vein and Associated Old Workings

210 Level

(210' Below Revenue Level)

Lunch Room

1+00

BRATTICE STOPPING

Closed No Access

0+00

(If Stoppings Removed Drifts Connect to Various Old Workings)

Raise/Incline 4,400 cfm

Substation 4160v to 480v

No. 1 Shaft Hoist Room

Rope Raise

R/M #10 4,000 cfm

Spiles

R/M #9 3,900 cfm

24" Vent Bag

XC-1

XC-2

XC-3

ETC.

Air Exhausting To Surface Through Old Workings

Closed No Access Blocked by Waste Rock

Virginius South

V/S #2 8,500 cfm

Old stopes on vein (Caved?) Not Rehabilitated or Explored Connect to Old Workings

(See Long-Section)

Middle Level

Level-7

Working Headings

Mine Grid North

0

300

Historic Mine Drift and Stope Locations on This Map are Based on Historic Maps. Star Mine Operations Will Update Maps as Actual Workings Locations Can be Verified.

FAN #4 SPENDRUP FAN (063-04

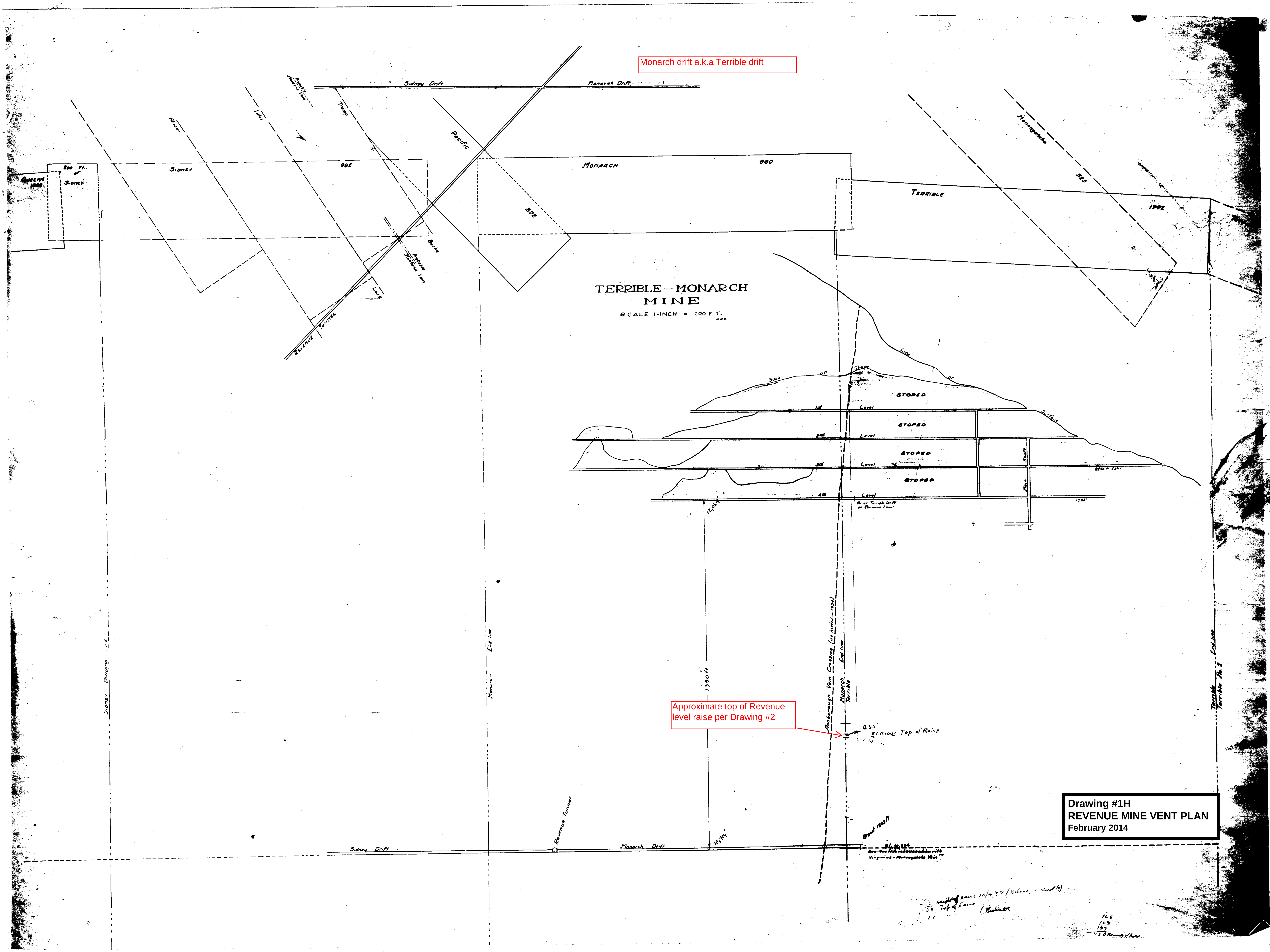
☆ STAR MINE OPERATIONS ☆

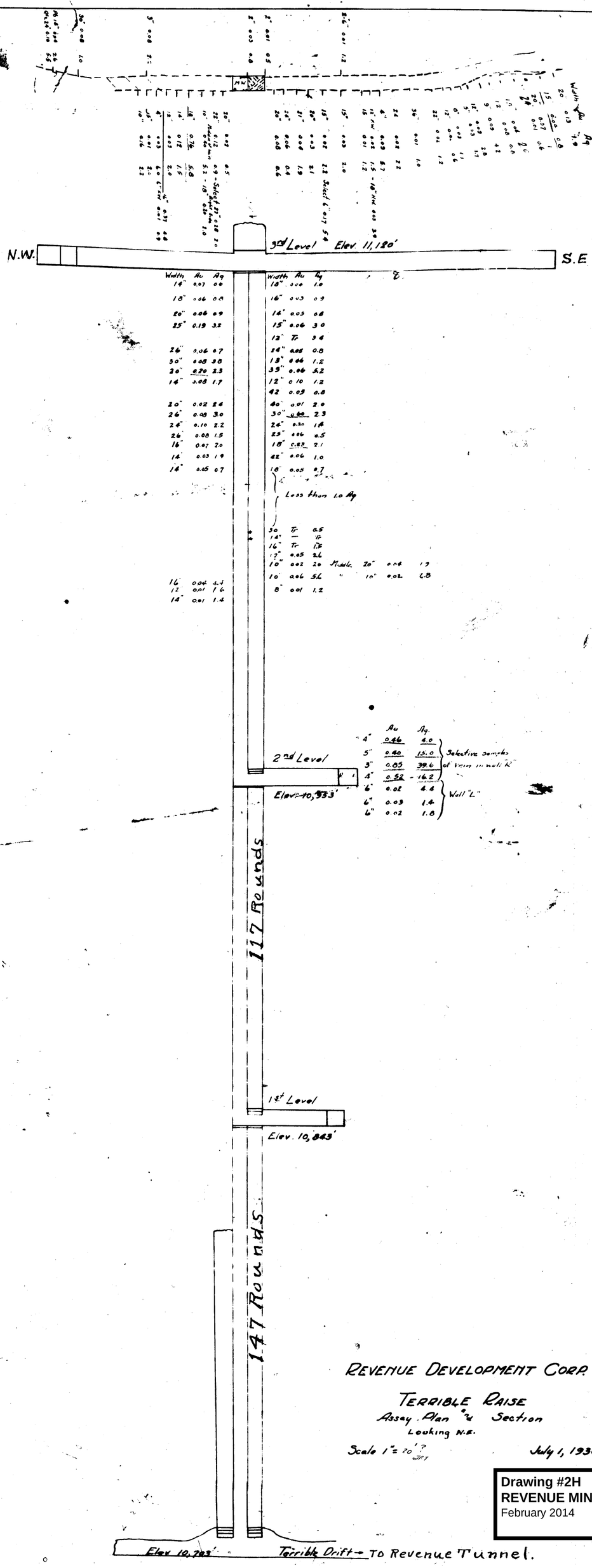
MINE VENTILATION PLAN MAP-5
REVENUE MINE
T 43 N, R 8 W - Ouray County, Colorado
MSHA ID 05-03528

Base Map Drawn by: J. R. Trujillo
Updated by: M. W. Chenoweth P.E.
Ventilation by: J. A. Bettridge

Drawn: 1/09/14
REV -C (2/23/14)

1"=50'


Monarch drift a.k.a Terrible drift
TERRIBLE – MONARCH
MINE
SCALE 1-INCH = 200 FT.
Sidney Drift
Monarch Drift
Pacific
Sidney
982
Monarch
990
822
Terrible
1892
Monongahela
Revenue Tunnel
Burke
Stoped
1st Level
2nd Level
3rd Level
4th Level
Surface
Shaft
End line
Sidney Division
1350 ft
Approximate top of Revenue level raise per Drawing #2
El. 11,100' Top of Raise
Sidney Drift
Revenue Tunnel
Monarch Drift
Drawing #1H
REVENUE MINE VENT PLAN
February 2014



REVENUE DEVELOPMENT CORP.

TERRIBLE RAISE

Assay Plan & Section

Looking N.E.

Scale 1" = 20'

July 1, 1936.

Drawing #2H
REVENUE MINE VENT PLAN
February 2014

11,200

11,000

10,800

10,600

10,400

10,200

2,500 W

REVENUE TUNNEL

ATLAS – REVENUE LEVEL DR S.E.

CUMBERLAND – REVENUE LEVEL DRIFT N.W.

200 LEVEL DR. N.W.

DRIFT ON MAIN VEIN

DRIFT ON N'LY VEIN

? SOUTH ERLY EXTENSION OF 200 LEVEL DR SE

INFERRED EXTENSION OF N'LY VEIN

OLD STOPE OUTLINE PER OLD MAPS

BELOE RAISE

PLAT HOUSE

IF IN PLACE

CUMBERLAND SHAFT

No. 1 LEVEL

ATLAS (IDARADO)

ATLAS EXTENSION (FEDERAL – C.B.)

(PROPERTY BOUNDARY)

PROBABLE DUPLICATION OF STOPABLE GROUND

	Σ	Δ
	0.032	0.026
	6.59	5.33
	5.81	4.70
	2.78	2.23
	31.5°	47.6°

630'
MIR: $32.55 / 13.24 BEP. 804

	Σ	Δ
	0.04	0.02
	13.27	9.72
	9.19	3.13
	3.01	1.60
	22.7°	42.0°

230'
MIR: $38.42 / 24.44

	Σ	Δ
	0.03	0.03
	2.90	2.44
	5.46	5.07
	2.61	2.49
	47.0°	50.6°

400'
MIR: $18.63 / 17.25 B.E.

	Σ	Δ
	0.04	0.04
	6.38	5.92
	7.84	7.27
	70.6°	FAT

from old maps

ASSAY LEGEND

FT	W"	Au oz	Ag oz	Pb %	Cu %	Zn %
70	48	03	3.2	6.7	02	4.4

NOTE:
RESPECTIVE LEVEL ELEVATIONS ARE BASED UPON LIMITED DATA TO HAND AND ARE REASONABLY ACCURATE FOR IMMEDIATE PURPOSES. POSITIONS AND HEIGHTS OF RAISES PLOTTED FROM OLD MAPS.

Drawing #3H
REVENUE MINE VENT PLAN
February 2014

FEDERAL RESOURCES CORP.

CAMP BIRD COLORADO INC.

MINE: REVENUE, OURAY, COLORADO	DRAWING NO. A-1
SECTION: CUMBERLAND	ASSAY
CONSTRUCTED BY: C.P. TREMLETT	SCALE: 1"=40'
TRACED BY M.A. MARANO	BLOCK NO. C/2 B/2 C/3 B/3
DESCRIPTION: LONG SECTION LOOKING S 40°W	DATE: SEPT. 30, 1964

Revenue-Virginius Project

Drawing #4H
REVENU MINE VENT PLAN
February 2014

Revenue Level
Scale 1" = 50'